



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/927,509	08/13/2001	Shingo Ohkawa	1185.1063	5900

21171 7590 03/12/2003

STAAS & HALSEY LLP
700 11TH STREET, NW
SUITE 500
WASHINGTON, DC 20001

EXAMINER

TSIDULKO, MARK

ART UNIT	PAPER NUMBER
----------	--------------

2875

DATE MAILED: 03/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/927,509

Applicant(s)

OHKAWA, SHINGO

Examiner

Mark Tsidulko

Art Unit

2875

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 13 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-6, 9 and 10 is/are rejected.
- 7) ☐ Claim(s) 7, 8 and 11-15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on 13 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Objections

Claims **7, 8, 12, 13** are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from any other multiple dependent claims.

Claims **14, 15** are improper since they depends from an improper multiple dependent claims **12** and **13**.

See MPEP § 608.01(n). Accordingly, the claims **7, 8** are not been further treated on the merits.

The status of Claims **7, 8, 12-15** (i.e. if allowable or not) cannot be determined because of the vagueness of the claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims **1-6, 9** are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohkawa (US 6,334,690) in view of Shono et al. (US 5,719,649).

Referring to Claims **1-3, 9** Ohkawa discloses (Fig.1) a light guide plate having an emission face [2C], a back face [2B] and end face [2A], and a light source [7].

Ohkawa disclose the instant claimed invention except for the back face is provided with a great number of micro-reflectors having two slopes with different angles. The light components released

Art Unit: 2875

from second slope [42] become elements having less than prescribed elevation angle. This angle becomes smaller than that of the cone of the directional distribution of light source light when it entered light guide, thereby increasing the directivity of the emergent light projected from the light guide. It is understood that micro-reflectors can obtain any desired orientation depending on necessity.

Shono et al. disclose (Fig.2) a light guide plate having a great number of micro-reflectors [4]. each micro-reflector has a first [41] and second [42] slopes, the first slope[41] being inclined with respect to an extending plane of the emission face more gently than the second slope [42]. An inputted light being converted into an inner output light directed to the emission face by a pair of inner reflections effected by the first slope and then effected by a the second slope, thereby emitted from the emission face (col.5, lines 51-67; col.6, lines 10-28).

It would have been obvious to one having ordinary skill in the art, at the time the invention was made, to provide the light guide plate of Ohkawa with micro-reflectors of Shono et al. for purpose of increasing the directivity of the emergent light projected from the light guide.

Referring to Claims **4, 5** Ohkawa discloses (Fig.1) a reflection member [8] having an irregular reflectivity (col.3, lines 54-56).

Referring to Claims **6/3, 6/4, 6/5** and **10** it is understood that the micro-reflectors can have any desired variant of orientation depending on necessity.

Allowable Subject Matter

Art Unit: 2875

Claim **11** is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims because the prior art of record fails to show a surface light source device wherein light inputting is done from a plurality of directions different from one another and the great number of micro-reflectors oriented into groups corresponding to the plurality of directions respectively so that micro-reflectors belonging to each of the groups has charge of a partial production of the inner output light according to a share allotted to each of the groups.

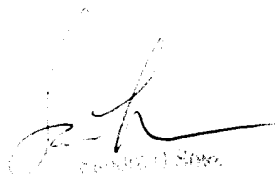
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Tsidulko whose telephone number is (703)308-1326. The examiner can normally be reached on 8 - 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on (703) 305-4939. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703)872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

M.T.
March 3, 2003


Sandra O'Shea
Supervisory Patent Examiner
Technology Center 2800